IT Project Proposal Report - Detail
Agency: 047 - EDUCATIONAL TELECOMMUNICATIONS COMM
Budget Cycle: 2019-2021 Biennium Version: AF - AGENCY FINAL REQUEST

IT Project : KXNE TV Transmitter Replacement

General Section

Contact Name :	Ling Ling Sun	**E-mail :**	lsun@NETnebraska.org	**Agency Priority :**	4
Address :	1800 North 33rd St	**Telephone :**	402-472-9333	**NITC Priority :**	
City :	Lincoln			**NITC Score :**	
State :	Nebraska	**Zip :**	68503		

Expenditures

IT Project Costs	Total	Prior Exp	FY18 Appr/Reappr	FY20 Request	FY21 Request	Future Add
Contractual Services						
Design	0	0	0	0	0	0
Programming	0	0	0	0	0	0
Project Management	0	0	0	0	0	0
Data Conversion	0	0	0	0	0	0
Other	0	0	0	0	0	0
Subtotal Contractual Services	0	0	0	0	0	0
Telecommunications						
Data	0	0	0	0	0	0
Video	0	0	0	0	0	0
Voice	0	0	0	0	0	0
Wireless	0	0	0	0	0	0
Subtotal Telecommunications	0	0	0	0	0	0
Training						
Technical Staff	0	0	0	0	0	0
End-user Staff	0	0	0	0	0	0
Subtotal Training	0	0	0	0	0	0

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Expenditures

IT Project Costs	Total	Prior Exp	FY18 Appr/Reappr	FY20 Request	FY21 Request	Future Add
Other Project Costs						
Personnnel Cost	0	0	0	0	0	0
Supplies & Materials	0	0	0	0	0	0
Travel	0	0	0	0	0	0
Other	0	0	0	0	0	0
Subtotal Other Project Costs	0	0	0	0	0	0
Capital Expenditures						
Hardware	407,000	0	0	0	407,000	0
Software	0	0	0	0	0	0
Network	0	0	0	0	0	0
Other	20,000	0	0	0	20,000	0
Subtotal Capital Expenditures	427,000	0	0	0	427,000	0
TOTAL PROJECT COST	427,000	0	0	0	427,000	0

Funding

Fund Type	Total	Prior Exp	FY18 Appr/Reappr	FY20 Request	FY21 Request	Future Add
General Fund	427,000	0	0	0	427,000	0
Cash Fund	0	0	0	0	0	0
Federal Fund	0	0	0	0	0	0
Revolving Fund	0	0	0	0	0	0
Other Fund	0	0	0	0	0	0
TOTAL FUNDING	**427,000**	**0**	**0**	**0**	**427,000**	**0**
VARIANCE	**0**	**0**	**0**	**0**	**0**	**0**

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EXECUTIVE SUMMARY:

NET seeks funding to replace the television transmitter at KXNE (Norfolk). The present transmitter is a 20 year old Inductive Output Tube (IOT) liquid cooled model that was modified for DTV transmission in 2009. IOT transmitters are no longer manufactured and the tubes are very difficult to acquire. The new transmitter will be a much more energy efficient solid state transmitter which will be upgradeable to the ATSC 3.0 broadcast standard. It will replace the last IOT in the NET television system.

Delaying the replacement risks significant broadcast television service outages if repairs are required due to the scarcity of parts. NET is seeking to avoid the need to replace the IOT power tube in this transmitter at an estimated cost of $45,000. The tube cost will continue to rise at a higher than normal rate due to the overall lack of inventory worldwide plus the low level of activity for these tubes will also put pressure on availability of acquiring a replacement tube. Any outage would also effect satellite services and northeastern Nebraska cable subscribers.

GOALS, OBJECTIVES, AND OUTCOMES (15 PTS):

The goal is to replace present IOT transmitter with a solid state television transmitter. Solid state television transmitters are more energy efficient and more reliable. The transmitter will also be upgradable to the ATSC 3.0 broadcast standard. Replacing KXNE TV transmitter will allow us to maintain a reliable and sustainable broadcasts in northeastern Nebraska for over the air dissemination and further redistribution by cable and DBS via over the air pickup.

The measurement and assessment methods will be monitoring and feedback from NET viewers and local cable and DBS headends. The project should positively impact the NET operating budget which by reducing annual operating and maintenance costs. ATSC 3.0 is the Next-Gen TV standard. The replacement transmitter is ATSC 3.0 upgradable. It will get NET ready for future deployment. NET will build an efficient organization through advanced technology. This project will recognize efficiencies in operating and maintenance cost, and utility savings.

PROJECT JUSTIFICATION / BUSINESS CASE (25 PTS):

The new solid state transmitter is energy efficient and reliable. It will reduce both operating and maintenance costs. NET viewers, and local cable/ DBS headends over the air pick up will benefit from increased uptime. The new transmitter will be upgradeable to the ATSC 3.0 broadcast standard. IOT transmitters are no longer manufactured. The IOT and other parts are very difficult to acquire. Doing nothing will risk significant broadcast television service outages and incur high maintenance cost.

TECHNICAL IMPACT (20 PTS):

The present IOT transmitter is no longer manufactured and the tubes and other parts are very difficult to acquire. Solid state television transmitters are easier to maintain, energy efficient, require less maintenance, and lower service cost. The new transmitter will be ATSC 3.0 upgradable. The solid state transmitter is technologically future proof and upgradable to the ATSC 3.0 standard, the new standard for Next-Gen TV transmission. The new television transmitter meets industry standards and is upgradable to the ATSC 3.0 standard. The new television transmitter is completely compatible with existing institutional infrastructure.

PRELIMINARY PLAN FOR IMPLEMENTATION (10 PTS):

NET is planning to purchase a solid state television transmitter, its installation and proof of performance through the competitive bidding process. NET is the project sponsor. NET Television viewers, local cable and DBS headends in northeastern Nebraska are the stakeholders. NET will act as the project manager for this project. The major deliverable for this project is the removal of the old system and replacement of the new system. The time frame for this work is 2-3 weeks from receipt of the system. No immediate training or staff development is required for the replacement. Operations will be seamless to present day workflow. Operational familiarity to the new transmitter will be gained through involvement of on-site transmitter installation and proof of performance. A manufacturer training session may take place after the transmitter installation for effective troubleshooting and maintenance. No additional support is required, other than routine operational maintenance.

RISK ASSESSMENT (10 PTS):

Delaying the replacement risks significant broadcast television service outages if repairs are required due to the scarcity of parts. Any outage would also effect satellite and northeastern Nebraska cable subscribers.

This purchase will be made under the State Purchasing Guidelines to minimize risk. Any assistance with contractual parties will have bonding and insurance requirements to assure protection to the State of Nebraska.

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FINANCIAL ANALYSIS AND BUDGET (20 PTS):

Total Cost is estimated at $427,000. See details in Financial Tab above. Also under Capital Construction Projects of this Budget System.